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<b>(21) International Application Number:</b> PCT/IB00/00792 <b>(22) International Filing Date:</b> 14 June 2000 (14.06.2000) <b>(30) Priority Data:</b> 99/3941 14 June 1999 (14.06.1999) ZA <b>(60) Parent Application or Grant</b> GOLDSTEIN, Ran [/]; (). WEINBREN, Gregory, Paul [/]; (). MEDALIE, Leslie [/]; (). GOLDSTEIN, Ran [/]; (). WEINBREN, Gregory, Paul [/]; (). MEDALIE, Leslie [/]; (). GILSON, David, Grant ; ().		<b>Published</b>
<b>(54) Title: LOTTERY SYSTEM</b> <b>(54) Titre: SYSTEME DE LOTERIE</b>  <b>(57) Abstract</b> <p>A method of operating a lottery comprises allocating individual lottery numbers to participants who are subscribers to a mobile telephone service. The lottery number can be derived from the MSISDN of the subscriber or other data. From time to time a winning lottery number is generated, and subscribers are required to contact a call centre to establish whether or not their number is the winning number. The revenue generated by the calls funds the lottery itself.</p> <b>(57) Abrégé</b> <p>L'invention concerne un procédé de loterie consistant à attribuer des numéros de loterie à chacun des participants, en l'occurrence les abonnés d'un service de téléphonie mobile. Ce numéro peut être déduit du numéro RNIS de la station mobile de l'abonné ou de données autres. Périodiquement, un numéro de loterie gagnant est généré. Les abonnés doivent alors contacter un centre d'appels pour savoir si leur numéro correspond au numéro gagnant. Les recettes générées par les appels permettent de financer la loterie.</p>		

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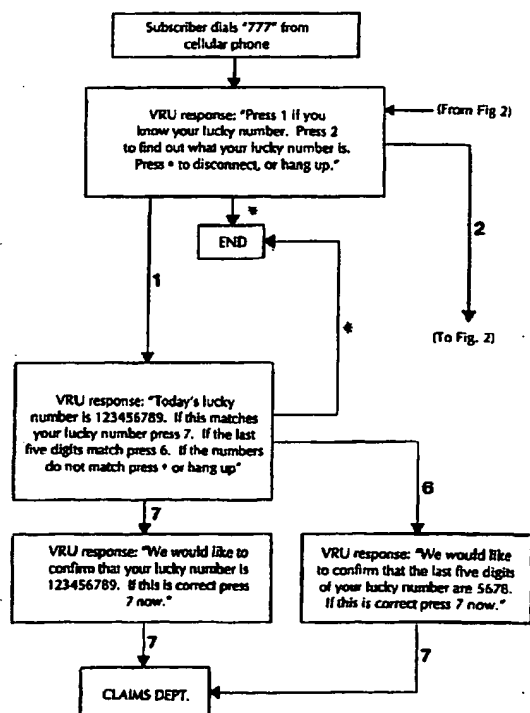
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(54) Title: **LOTTERY SYSTEM**



(57) Abstract: A method of operating a lottery comprises allocating individual lottery numbers to participants who are subscribers to a mobile telephone service. The lottery number can be derived from the MSISDN of the subscriber or other data. From time to time a winning lottery number is generated, and subscribers are required to contact a call centre to establish whether or not their number is the winning number. The revenue generated by the calls funds the lottery itself.

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**Description**

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**LOTTERY SYSTEM**

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**BACKGROUND OF THE INVENTION**

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THIS invention relates to a method of operating a lottery.

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Many lottery schemes exist. Some are run purely as a gambling operation, while others have a charitable aspect.

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Most lotteries require a participant to purchase a lottery ticket, which is inconvenient and which tends to limit the number of participants.

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It is an object of the invention to provide an alternative method of operating a lottery.

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**CONFIRMATION COPY**

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**SUMMARY OF THE INVENTION**

According to the invention there is provided a method of operating a lottery, the method comprising:

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defining a group of potential lottery participants corresponding to a group of subscribers to a mobile telephone service;

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allocating a lottery number to each participant, the lottery number being related to existing telephone service data of the participant;

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generating a winning lottery number;

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comparing the winning lottery number with the lottery numbers of participants; and

allocating a prize to a participant whose lottery number matches the winning lottery number.

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The method may include the step of participants contacting the lottery operator to be advised of their lottery numbers.

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Preferably, the participants are required to contact the lottery operator on a designated number of the mobile telephone service.

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The step of comparing the winning lottery number with the lottery number of participants may be carried out by requiring the participants to contact the lottery operator to supply their lottery number and/or to be advised of the winning lottery number.

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The method may further include the step of requiring a participant whose lottery number corresponds to the winning lottery number to contact the lottery operator to claim a prize.

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In either case the participants may be required to contact the lottery operator on a designated number of the mobile telephone service.

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Preferably, the participants contact the lottery operator by making calls to a voice responsive unit at a call centre.

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Alternatively, the participants may contact the lottery operator by sending short messages to a data centre using a short message service of the mobile telephone service.

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Preferably, the lottery number allocated to each participant is derived from the Mobile Subscriber Integrated Service Digital Number (MSISDN) of the participant.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

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**Figures 1 & 2** are simplified flowcharts illustrating the process by which a subscriber obtains his/her lottery number and a winning lottery number from a VRU based call centre, according to the method of the invention;

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**Figure 3** is a simplified flowchart showing how a subscriber obtains his/her lottery number using a short message service of the telephone service operator; and

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**Figure 4** is a simplified flowchart showing the procedure utilised by a subscriber to obtain the winning lottery number utilising the short message service.

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#### **DESCRIPTION OF AN EMBODIMENT**

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The present invention aims to provide a method of operating a lottery in which the participants in the lottery are essentially predetermined by their being subscribers to a mobile telephone service (in most cases, a cellular telephone service). Instead of providing for individuals to enter the lottery on a random, voluntary basis, the invention enters each subscriber in a lottery automatically from time to time, so that it is only necessary for the subscribers to enquire from the lottery operator as to whether or not they have won.

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Many mobile telephone networks make use of the GSM digital cellular system. Each network subscriber has a Mobile Subscriber Integrated Service Digital Number (MSISDN). This is the directory number dialed to reach a subscriber, and is unique to that subscriber. The number includes a country code and the national designation code, which identifies the subscriber's operator. The remaining digits comprise the subscriber's number which identify the subscriber's Home Location Register (HLR) within the home Public Land Mobile Network (PLMN).

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Since each subscriber's MSISDN is unique, either the number itself or, preferably, a number or code derived from the number can be utilised to determine a unique "lucky number" or lottery number for each subscriber. Obviously, another number, code or other data which is unique to each subscriber (for example, an account number) could be used for deriving a lottery number.

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Subscribers can generally be classified into pre-paid and contract (or post-paid) subscribers. Subscribers in the former group generally purchase "air time" in the form of pre-paid SIM cards which are "loaded" with a predetermined credit which is decremented as the user makes calls. Contract or post-paid subscribers are usually those whose credit-worthiness has been assessed as being sufficiently good for them to be invoiced monthly in arrears for calls made. Within this latter group, sub-groups may be identified, for example: subscribers to various subscription packages offered by network operators; corporate users, and so on. It will be appreciated that the lottery of the invention can be made applicable to all active subscribers, or any combination of groups and sub-groups. The latter possibility may be useful, for example, in conducting promotions of certain packages or services of a network operator.

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An SQL database is utilised to store the MSISDN's of the selected subscribers, and a suitable algorithm is then applied to each number to generate lottery numbers from each MSISDN.

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The lottery number or code for each subscriber can be determined in various ways. The lottery number can be generated once for each subscriber, or new numbers can be generated from time to time if required. Set out below is an example of a method of generating lottery numbers for each subscriber:

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The MSISDN is usually an 11 digit number, for example:

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+ 27 82 711 9321	-	South Africa
+ 61 41 620 2440	-	Australia
+ 31 20 638 3519	-	Netherlands
+ 85 22 897 0179	-	Hong Kong

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The first two digits are the country code. The next few digits are the area code and/or the Home Location Register (HLR). The last five digits are the unique subscriber number.

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The "lucky number" or lottery number is nine digits in length. The first two digits (ie. the country code) are dropped. The third digit will be multiplied by nine and only the second digit of the solution is used.

20

0	=	0
1	=	9
2	=	8
3	=	7
4	=	6
5	=	5
6	=	4
7	=	3
8	=	2
9	=	1

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The fourth digit is multiplied by three and only the second digit of the solution is used.

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0	=	0
1	=	3
2	=	6
3	=	9
4	=	2
5	=	5
6	=	8
7	=	1
8	=	4
9	=	7

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The fifth digit is the relevant number plus two, with only the second digit of the solution being used.

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0	=	2
1	=	3
2	=	4
3	=	5
4	=	6
5	=	7
6	=	8
7	=	9
8	=	0
9	=	1

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The sixth digit is the relevant number less one.

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0	=	9
1	=	0
2	=	1
3	=	2
4	=	3
5	=	4
6	=	5
7	=	6
8	=	7
9	=	8

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The seventh digit is multiplied by seven and only the second digit of the solution is used.

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0	=	0
1	=	7
2	=	4
3	=	1
4	=	8
5	=	5
6	=	2
7	=	9
8	=	6
9	=	3

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The eighth digit is the relevant number less three and only the second digit of the solution is used.

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0	=	7
1	=	8
2	=	9
3	=	0
4	=	1
5	=	2
6	=	3
7	=	4
8	=	5
9	=	6

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The ninth digit is the relevant number plus three and only the second digit of the solution is used.

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0	=	3
1	=	4
2	=	5
3	=	6

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4	=	7
5	=	8
6	=	9
7	=	0
8	=	1
9	=	2

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The tenth digit is the relevant number plus four and only the second digit of the solution is used.

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0	=	4
1	=	5
2	=	6
3	=	7
4	=	8
5	=	9
6	=	0
7	=	1
8	=	2
9	=	3

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The eleventh digit is left unchanged.

**EXAMPLES:**

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<b>MSISDN</b>	<b>LOTTERY NUMBER</b>
27827119321	269076661
61416202440	638109780
31206383519	808260859
85228970179	860897419

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It will be appreciated that the above example is merely one of many possible ways of generating a lottery number from the customer's MSISDN.

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In the prototype method of the invention, no charge is made for the issuing of a lottery number, and each subscriber is automatically a participant in the lottery. However, it will be appreciated that this aspect of the method can be varied, so that a charge can be levied for entry into the lottery, either on a voluntary basis, or on the basis of a regular debit to the subscriber's account. Conveniently, the telephone service operator can inform subscribers of their lottery numbers in their monthly accounts. Alternatively, or in addition, a subscriber can dial a call centre to be advised of his/her lottery number. The call centre can be staffed by human operators, but will be more cost effective if it utilises a Voice Responsive Unit (VRU) to interact with callers. The flowcharts of Figures 1 and 2 illustrate the process followed by a subscriber to obtain his/her lottery number from a call centre utilising a VRU.

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As an alternative, the Short Message Service (SMS) of the telephone service operator can be utilised by subscribers to transmit a request to a message or data centre for their individual lottery number, the lottery number then being transmitted back to the subscriber as a short message. The flowchart of Figure 3 illustrates this process graphically.

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From time to time, typically on a daily, weekly or monthly basis, a computer will generate a winning lottery number on a pseudo random basis or another acceptable basis. The subscriber whose lottery number corresponds to the winning lottery number is not automatically advised of this fact, but it is left to subscribers to check whether or not they have won. In order to do this, they must contact a call centre/message centre in much the same manner as described above in order to identify themselves and to be advised of whether or not they have won. The relevant voice and message based procedures are illustrated in the flowcharts of Figures 1 and 4.

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By way of example, the following procedure can be utilised in the case of calls to a call centre:

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A special number is allocated (eg. 777) which the subscriber dials to reach the call centre. The consumer is prompted to press a designated key if he/she knows his/her lottery number, in which case a computer generated voice message is generated, which reads out the winning number. If the number matches the subscriber's lottery number, he/she presses another designated key to be transferred to a claims department agent who obtains further details of the subscriber in order to verify them, and provides the subscriber with a claim number. The subscriber then has a limited period of time (say, two days) to go to a designated claims office with identification, his/her subscriber identity module (SIM) card, and/or other suitable identifying means, in order to claim the prize.

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It will be appreciated that the requirement that subscribers must make a call to obtain the winning lottery number, which will in most cases be a standard rate cellular call made from the subscriber's mobile handset, will generate a substantial amount of revenue which can be utilised to fund the lottery prizes. The prospect of winning the lottery will tend to enhance subscriber loyalty to the telephone service operator. If subscribers are required to make a call to be advised of their lottery number, this revenue will be increased.

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In a variation of the method, designed to deal with the possibility of the winning lottery number being published and thus circumventing the need for individual subscribers to contact the lottery operator to find out whether or not they have won, the subscribers contacting the call centre can be asked for their lottery number as described above, and are then told whether or not their number is a winning number, without being given the winning number itself. In

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due course, the winning number can be published for purposes of transparency.

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Numerous variations of the above described method are possible. However, the essence of the invention is the fact that a group of telephone service subscribers are automatically entered in a lottery or draw, and are required to make a call to enquire as to the result of the draw, thereby generating the necessary revenue to fund the prizes awarded.

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## Claims

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**CLAIMS:**

1. A method of operating a lottery, the method comprising:

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defining a group of potential lottery participants corresponding to a group of subscribers to a mobile telephone service;

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allocating a lottery number to each participant, the lottery number being related to existing telephone service data of the participant;

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generating a winning lottery number;

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comparing the winning lottery number with the lottery numbers of participants; and

allocating a prize to a participant whose lottery number matches the winning lottery number.

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2. A method accordingly to claim 1 including the step of participants contacting the lottery operator to be advised of their lottery numbers.

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3. A method according to claim 2 wherein the participants are required to contact the lottery operator on a designated number of the mobile telephone service.

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4. A method according to any one of claims 1 to 3 wherein the step of comparing the winning lottery number with the lottery number of participants is carried out by requiring the participants to contact the lottery operator to supply their lottery number and/or to be advised of the winning lottery number.

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5. A method according to any one of claims 1 to 4 including the step of requiring a participant whose lottery number corresponds to the winning lottery number to contact the lottery operator to claim a prize.

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6. A method according to claim 4 or claim 5 wherein the participants are required to contact the lottery operator on a designated number of the mobile telephone service.

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7. A method according to any one of claims 4 to 6 wherein the participants contact the lottery operator by making calls to a voice responsive unit at a call centre.

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8. A method according to any one of claims 4 to 6 wherein the participants contact the lottery operator by sending short messages to a data centre using a short message service of the mobile telephone service.

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9. A method according to any one of claims 1 to 8 wherein the lottery number allocated to each participant is derived from the Mobile Subscriber Integrated Service Digital Number (MSISDN) of the participant.

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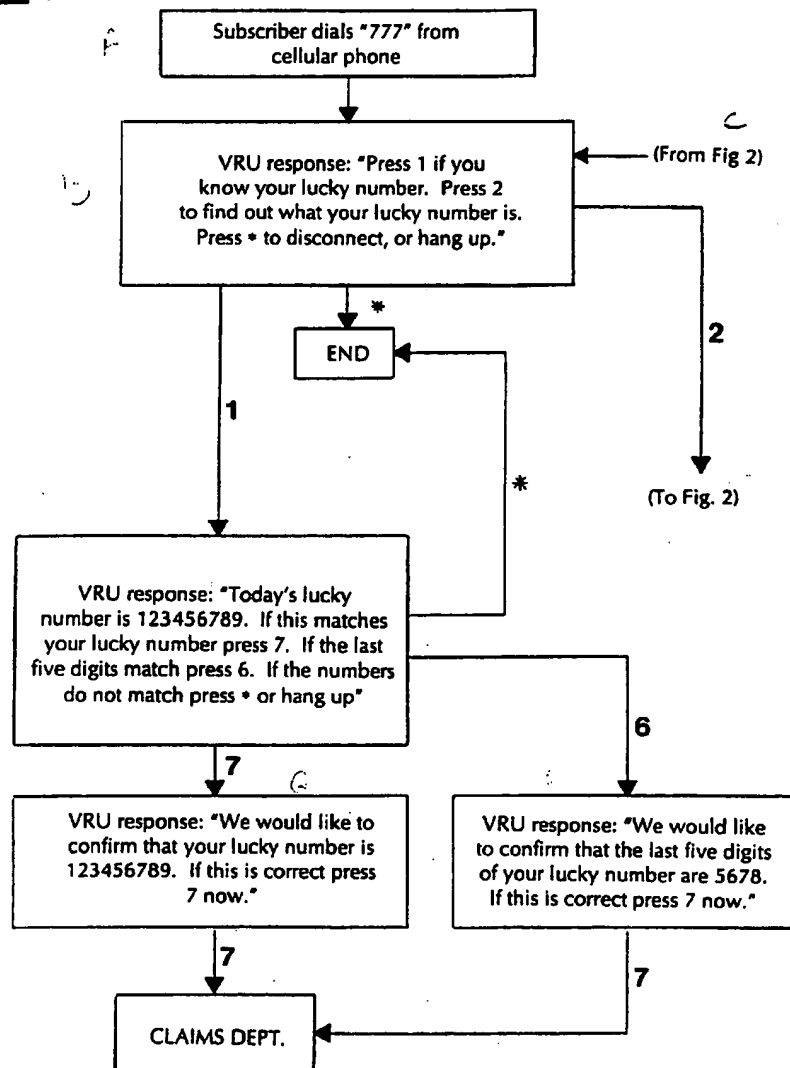
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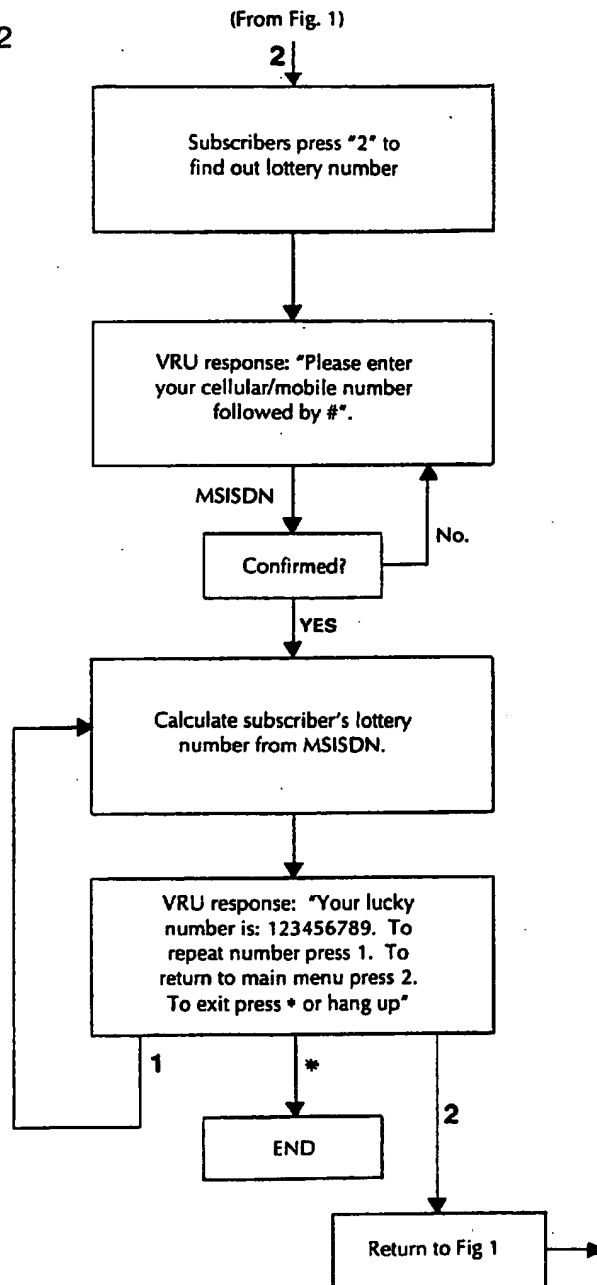
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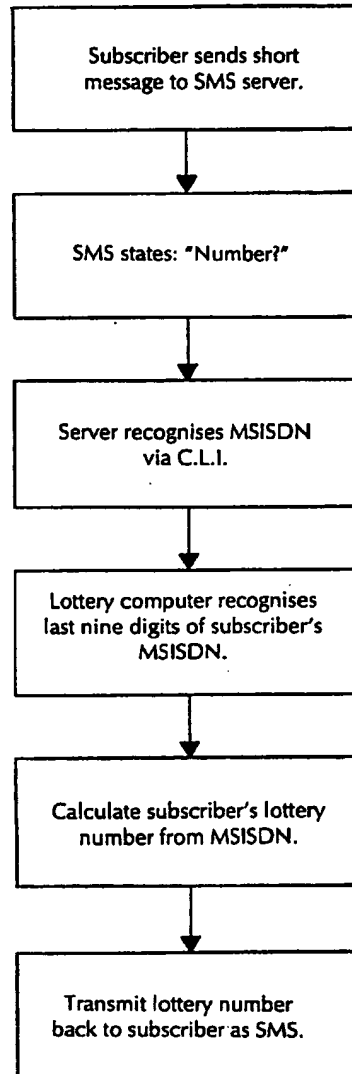
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Fig. 1

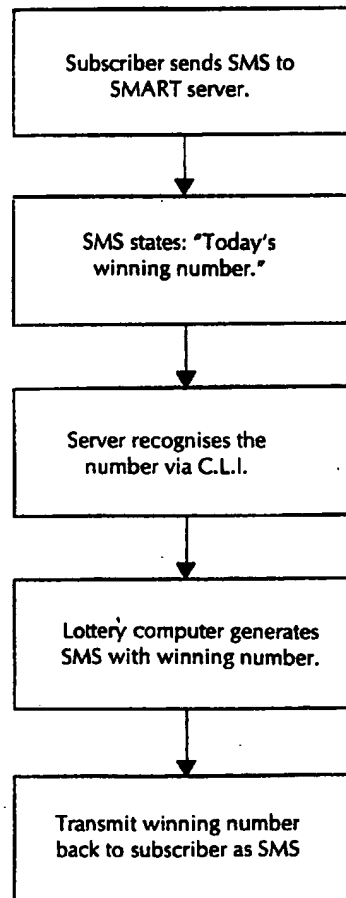
$\frac{2}{4}$ FIG 2

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FIG 4



## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/IB 00/00792

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 G07F17/32 A63F3/08 G07C15/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07C G07F G06F A63F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 5 519 771 A (IIJIMA MASAMI) 21 May 1996 (1996-05-21) abstract; claims; figures column 1, line 14 -column 2, line 55	1,2
A	US 4 996 705 A (POSTERICK BARRY L ET AL) 26 February 1991 (1991-02-26) abstract; claims; figures	1
A	DE 195 02 613 A (EIBA PETER) 1 August 1996 (1996-08-01) abstract; claims; figures	1
-/-		

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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Date of the actual completion of the international search

4 October 2000

Date of mailing of the international search report

11/10/2000

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International Application No  
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Form PCT/ISA/210 (continuation of second sheet) (July 1992)

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Information on patent family members

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